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# 植物研究雜誌

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## 朝比奈泰彦*: 地衣類雜記 (§ 120)

## Yasuhiko ASAHINA*: Lichenologische Notizen (§ 120).

### § 120. A New Arrangement of Japanese Cladonia verticillata-group.

1. **Cladonia verticillata** (Hoff.) Schaer., Lich. Helv. Spic., p. 31 (1823).

*Cl. pyxidata** *Cl. verticillata* Hoff. Deutschl. Fl., **2**: 122 (1796).

Thallus K—, PD+rubens. Acidum fumarprotocetraricum tantum continens.

var. **evoluta** (Th. Fr.) Stein, Flecht, Schles., (1879) p. 49.

*Cl. gracilis** *Cl. verticillata α. evoluta* Th. Fr., Lich. Scand. (1871) p. 83.

Thallus primarius squamis vulgo minoribus, demum evanescens. Podetia vulgo e centro scyphorum 2–6 tabulatis prolifera, apicibus scyphiferis.

In Japonia hucusque incognita.

Var. **cervicornis** (Ach.) Floerk. Clad. comm. (1828) p. 29.

*Lichen cervicornis* Ach., Lich. Suec. Prodr., (1898) p. 184.

Thallus primarius persistens, squamis mediocribus aut majusculis. Podetia vulgo simplicia vel paucis tabulatis prolifera.

f. **sobolifera** (Del.) Harm., Bull. Soc. Scienc. Nancy, ser. 2, **14**: 370 (1895). Anders, Die Strauch- u. Laubflecht. Mitteleuropa (1928) p. 106.

*Cl. pseudalcicornis* Asahina, J. Japan. Bot., **19**: 192 (1943).

Thallus primarius squamis maximis (usque ad 3 cm longis). Statura ut in *Cl. foliacea* Schaer.

Specimina visa: Hokkaido (Tomuraushi, leg. F. Fujikawa, 1935; Mt. Ashibetsu, leg. Y. Asahina, 1937; Mt. Kurodake-Daisetsu, leg. Y. Asahina, 1937). Hondo borealis )Mt. Hakkoda, leg. Y. Asahina, 1924; Mt. Osoresan, leg. Y. Asahina, 1924; Mt. Gassan, leg. M. M. Sato, 1932; Mt. Chokai, leg. M. M. Sato, 1948; MT.

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Chokai, leg. T. Makino, 1927). Hondo media (Mt. Shirouma-Norikura, leg. Y. Asahina, 1939; MT. Kinpoku-Sado, leg. M. Togashi, 1954; Mt. Tateyama, leg. Y. Asahina, 1936; Magawa-Ettyu, leg. Y. Asahina, 1936; Mt. Taroyama, leg. Y. Asahina, 1936; Mt. Kaminotake, leg. Y. Asahina, 1936).

2. **Cladonia Krempelhuberi** Vain. Acta Soc. Fauna et Flora Fennica, **53**: 102 (1922).

*Cl. verticillata* Hoffm. *β. Krempelhuberi* Vain., Monogr. II (1894) p. 187; III (1898) p. 259.

*Cl. cervicornis Cl. verticillata* Nyl., Lich. Japon. (1890) p. 20.

Thallus K+flavens, PD+rubens. Acidum fumarprotocetraricum et atranorinum continens.

var. **subevoluta** (Asahina) Asahina, comb. nov.

*Cl. verticillata* var. *subevoluta* Asahina, J. Japan. Bot. **16**: 464 (1940), Fig. 1 a,

var. **subsobolifera** (Asahina) Asahina, comb. nov.

*Cl. verticillata* var. *subsobolifera* Asahina, J. Japan. Bot. **16**: 465 (1940), Fig. 2 a, b.

var. **sublepidota** (Asahina) Asahina, comb. nov.

*Cl. verticillata* var. *sublepidota* Asahina, J. Japan. Bot. **16**: 465 (1940), Fig. 2 c.

3. **Cladonia dissimilis** Asahina, Lichens of Japan, **1**: 190 (1950).

*Cl. verticillata* Hoffm. subsp. *dissimilis* Asahina, J. Japan. Bot., **16**: 466 (1940); ibid. **19**: 231 (1943).

Habitus et reactiones ut in *Cl. Krempelhuberi* cum omnibus varietatibus analogicis. Thallus K+flavens, PD+rubens Vel —. Acidum homosekikaicum, atranorinum et acidum fumarprotocetraricum (quoad PD+) continens.

Specimina visa: Hondo (Matsukawa-ura, Soma-gun, Prov. Iwaki, leg. K. Ouchi, 1951; Shirouma-Tsugaike, leg. Y. Asahina, 1936-*sublepidota* type; Mt. Tateyama, leg. Y. Asahina, 1928-*subevoluta* type; Mt. Shibutsu-Oze, leg Y. Asahina, 1950-*sublepidota* type; Shimizu-Pass, Prov. Kozuke, leg. M. Togashi, 1951-*sublepidota* and *subevoluta* type; Mt. Horaiji, Prov. Mikawa, leg. Y. Asahina, 1956-*subsobolifera* type; Sand dune near Tottori, leg. Y. Ikoma, 1950-*subsobolifera* type;). Kiusiu; (Sakurajima, Prov. Satsuma, leg. Y. Asahina, 1938-*subevoluta* and *subsobolifera* type).

4. Cladonia Rappii Evans, Transact. Connect. Arts and Scienc. **38**: 297 (1952).

Habitus ut in *Cladonia verticillata* var. *evoluta* (Th. Fr.) Stein. Thallus K—, PD+flavens. Acidum psoromicum continens.

Distributio: Europa et America borealis.

5. **Cladonia calycantha** Del., Nylander, Syn. Meth. Lich. (1860) p. 192. Evans, Torreya, **35**: 101–103 (1935); Transact. Connect. Acad. Arts and Sciences, **38**: 292–297 (1952). Asahina, J. Japan. Bot., **16**: 467 (1940).

Var. calycantha

Habitus thalli ut in *Cl. verticillata* var. *evoluta*, sed delicatior. Podetia repetite prolifera, scyphis dilatatis, cortice subcontinuo. Thallus K—, PD+rubens. Acidum fumarprotocetraricum tantum continens.

Specimina visa: Hondo (Kirifuri Water Fall, Nikko, leg. F. Fujikawa, 1931: Higashimurayama, Prov. Musashi, leg Y. Asahina, 1932; Hanno, Prov. Musashi, leg. Y. Asahina, 1938; Mt. Amagi, Prov. Idzu, leg. Y. Asahina, 1930, 1934, 1938; Mt. Akiba, Prov. Ensiu, leg. Y. Asahina, 1925; Futagawa, Prov. Mikawa, leg. I. Yoshioka, 1938; Inuyama, Prov. Owari, Y. Asahina, 1938; Mt. Hira, Prov. Omi, leg. M. Togashi, 1956; Takatsuki, Prov. Settu, leg. S. Asahina, 1941; Mt. Rokko, Prov. Settu, leg. Y. Asahina, 1930; Mt. Nijosan-Donzurubo, Prov. Yamato, leg. Y. Asahina, 1949; Tsujido, Prov. Yamato, leg. S. Inumaru, 1933; Mt. Omine, Prov. Yamato, leg. S. Inumaru, 1947; Mt. Katsuragi, Prov. Izumi, leg. T. Maekawa, 1938; Kurisugawa, Prov- Kii, leg. Y. Asahina, 1924; Mt. Koya, Prov. Kii, leg. Numajiri, 1926; Mt. Takanosuyama, Prov. Aki, leg. S. Inumaru, 1930; Sandankyo, Prov. Aki, leg. S. Inumaru, 1946). Shikoku (Oronomura, Myosai-gun, Prov. Awa, leg. T. Inobe, 1940; Mt. Yokogura, Prov. Tosa, leg. F. Fujikawa, 1931; Yasukura, Prov. Tosa, leg. F. Fujikawa, 1931; Takara-mura, Katsuura-gun, Prov. Awa, leg. T. Inobe, 1940; Mt. Ishizuchi, Prov. Iyo, leg. F. Fujikawa, 1933). Kiusiu (Mt. Hachimensan, Prov. Buzen, leg. T. Watanabe, 1944; Danto, Prov. Higo, leg. F. Fujikawa, 1933: Iino, Prov. Hiuga, leg. K. Maebara, 1928; Mayuki, Prov. Hiuga, leg. K. Maebara, 1927; Mt. Kaimon, Prov. Satsuma, leg. Y. Asahina, 1938). Okinawa (Yagachi-jima, leg. M. Ogata, 1923). Formosa (Mt. Daiton, Taihoku-siu, leg. T. Suzuki, 1934).

var. **gracilior** Asahina var. nov.

Podetia graciliora, scyphis angustioribus, partim disperso corticata, strato chondroideo nigricante, albo maculato.

Specimina visa: Hondo (Kirifuri Water Fall, Nikko, leg. F. Fujikawa, 1931; Tsukigata-mura, Kanra-gun, Kozuke, leg. E. Uematsu, 1926; Hagano, Furuichi-mura, Taki-gun, Prov. Tanba, leg. M. Togashi, 1956). Shikoku (Mt. Otoyama, Prov. Tosa, leg. F. Fujikawa, 1931, Suminomachi, Prov. Iyo, leg. Ochi, 1943). Formosa (Rarasan, leg. Inumaru, 1941; Mt. Shichiseizan, S. Sasaki, 1927; Mt. Has-

senzan, Prov. Taichu, leg. S. Suzuki).

f. **recurvans** Asahina, J. Japan. Bot. **31**:69 (1956).

Specimina visa: Hondo (Ashiu, Prov. Tanba, leg. Y. Asahina, 1942; Ohara, Kyoto, leg. M. Togashi, 1954). Shikoku (Yasukura, Prov. Tosa, leg. F. Fujikawa, 1931; Nogawa, Prov. Tosa, leg. F. Fujikawa, 1931; Sumino-machi, Prov. Iyo, leg. Ochi, 1943), Kiusiu (Danto, Prov. Higo, leg. F. Fujikawa, 1933).

Some time ago Evans[1] separated those specimens containing psoromic acid from their morphological analogue *Cladonia verticillata* and established a new species *Cladonia Rappii* Evans. Following in his principle I wish to arrange *Cladonia verticillata*-group with special reference to Japanese specimens as stated above. Curious to say that no proper specimen of *Cladonia verticillata* var. *evoluta* has ever been confirmed in Japan. All specimens determined as such proved to be either *Cl. calycantha* Del. or *Cl. Krempelhuberi* var. *subevoluta* Asahina. Though Vainio cited *Cl. subverticillata* Nyl, of Lichenes Japoniae, p. 20 as a synonym of var. *evoluta*, it deals, in all probability, with a form of *Cladonia calycantha*. On the contrary numerous specimens with larger primary thalli were collected in Hokkaido and northern Hondo, which belong to var. *cervicornis* (Ach.) Flk. As these specimens possess exceedingly extended primary thalli, they were once considered to be an autonomous species *Cl. pseudalcicornis* Asahina, but now I am going to identify them with *Cl. verticillata* var. *cervicornis* f. *sobolifera* Harm. Among three varieties of *Cl. Krempelhuberi* Vain. the var. *subevoluta* stands in the place of *Cl. verticillata* var. *evoluta* in Japan and var. *subsobolifera* Asahina represents var. cervicornis (Ach.) Flk. Var. *sublepidota* Asahina is of peculiar existence. At a glance it reminds of *Cl. gracilescens*, but the latter is an inhabitant of alpine or subalpine region in Japan, whereas the var. *sublepidota* is frequently found in the lower lands. *Cladonia dissimilis* Asahina exhibits also morphological variations corresponding with those of *Cl. verticillata* as well as of *Cl. Krempelhuberi*. An adequate subdivisions of the species will be carried out with rich specimens in the future.

筆者は本誌第16巻462-470頁で *Cladonia verticillata* と *Cladonia calycantha* に関する当時の見解を発表した。其後に出版した日本之地衣第1冊の *Cladonia verticillata* 群の記事は大体それを根底とし唯 *Cladonia dissimilis* は之を *verticillata* の亜種から独立種に引上げたのである。其後 Evans は Florida の地衣目録を作つた際筆者が Sandstede

[1] Transact. Connect. Acad. Arts and Sciences, **38**: 297 (1952).

の腊葉内で発見した P+黄色(プソローム酸含有)の箇体を独立種に引上げ *Cladonia Rappii* Evans を設定した。そこで筆者は *verticillata* 群に属する K+黄色(アトラノリン)のものを嘗て Vainio が行つたような独立種 *Cl. Krempelhuberi* Vain. なる名で呼ぶことにすると含有成分による区別がハツキリしてくる。尚今回の調査で明になつたことは K− の *Cl. verticillata* の主体である var. *evoluta* (階段的子柄の顕著なもの)は本邦には発見されず唯他の変種 var. *cervicornis* (葉体大に発達し子柄単一盃に近きもの)が本邦北部に出現し嘗て筆者は之を独立種 *Cl. pseudalcicornis* にした位に葉体が長いので之を var. *cervicornis* f. *sobolifera* Harm. に充てたらよいと思つて居る。又本邦中部から南部にかけて多産する顕著な階段的の子柄を有するものは殆どすべてが *Cladonia calycantha* であつて *verticillata* ではない。是等の新研究の結果拙著日本之地衣第 1 冊 187-191 頁を繙読される学者は上の訂正に注せられんことを希望する。

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**○ カヤツリグサ属の一雑種** (小山鉄夫) Tetsuo KOYAMA: A new natural hybrid of *Cyperus*.

宇都宮の小川晃一氏は同市郊外でチャガヤツリとハマスゲの雑種を採集された。花序部はチャガヤツリに近く，地下部はハマスゲ様である。この両者は分類学上非常に近縁なものとは云へないが，小川氏の標本では果実は完全である。尚小川氏は栃木県の植物を広く採集され，同地の同好会誌 "とちのき" を主宰されている植物愛好家である。

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**Cyperus × Ogawai** T. Koyama, hybr. nova inter *Cyp. amuricum* Maxim. et *Cyp. rotundum* Linn.; squamis majoribus ad 2.7 mm longis partim sanguinescentibus utrinque conspicue trinervatis abs *Cypero amuico* diversus.

Anthela composita 5-7 cm longa ac lata, bracteis 3-4 foliaceis anthelam subduplo superantibus, radiis 4-6 ex ochrea bicostata apice truncata mucronulata deorsum fuscata ortis, spicis late ovoideis dense 11-29-spiculosis, rachi angustissime alata, spiculis rectangulariter divergentibus distiche ca. 20-floris 1.5 cm longis 1.5 mm latis, rhachilla lanceolatoalata, squamis obovato-ovalibus 2.4-2.7 mm longis latere fuscis partim sanguinescentibus utrinque distincte trinervis, costa viridi ex apice squamae in aristam ca. $^1/_3$ mm longam excurrente, nuce oblongo-obovata glauco-fusca ex toto dense puncticulata, stylo brevi superne trifido—Culmi 1 ad pauci e rhizomate brevi crassiusculo ad 3 dm alti basi paucifoliati et vaginis purpurascentibus obsiti; folia linearia herbacea $^1/_2$-$^3/_4$-culmi aequantia.

TYPUS: urbe Utsunomiya in Prov. Shimotsuke; leg. Koichi Ogawa, n. 27! —TNS.